Behavioral Interventions for Recent Trauma

Empirically Informed Practice Guidelines

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Despite the successes in the treatment of chronic trauma-related distress, little attention has been devoted to developing behavioral interventions to be delivered soon after traumatic exposure in an effort to promote positive posttraumatic adjustment and to minimize the likelihood of enduring psychopathology. As a result, other forms of early intervention have filled this void and have been widely disseminated and applied, despite the lack of compelling evidence attesting to their efficacy. This article reviews the literature bearing on early interventions for trauma, including the encouraging outcomes of recently developed behavioral treatments. Empirically informed practice guidelines for intervening with recently traumatized individuals are presented. Future treatment development efforts will need to address an issue that has been largely neglected in traditional treatment models for traumatized populations—that of traumatic bereavement. Behavioral interventions may be particularly well-equipped to address this source of distress.

Keywords: *early intervention for trauma; psychological debriefing; CISD*

Despite the existence of a number of effective treatment approaches for individuals who have developed chronic psychopathology following a traumatic event, interventions designed to be delivered soon after trauma to prevent chronic distress remain underdeveloped and understudied. Recent years have witnessed a proliferation in the literature bearing on the few formalized early interventions for trauma that do exist (e.g., critical incident stress debriefing; CISD; Mitchell & Everly, 1996), but rigorous empirical trials of these approaches are

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scant. Moreover, very few systematic treatment modalities have been developed to address severe distress in the immediate aftermath of traumatic exposure. This is particularly surprising given the ubiquity of exposure to potentially traumatic events (Breslau et al., 1998; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995) coupled with the obvious desirability of, to the extent possible, preventing chronic pathology as opposed to treating chronic symptoms that have developed.

This article will briefly review the efficacy and limitations of early interventions for trauma to date, with special attention paid to promising behavioral interventions that have been recently developed. Implications for future treatment efforts based on these behavioral approaches will be discussed. Finally, practice guidelines informed by learning theory and existing empirical evidence will be enumerated.

SYMPTOM COURSE FOLLOWING TRAUMATIC EXPOSURE

Before describing common forms of psychopathology that can ensue in the wake of trauma, it is essential to point out that the vast majority of trauma victims do not exhibit chronic distress. Although most trauma victims report significant distress immediately following trauma, it has been estimated that only 9% of trauma victims will develop chronic posttraumatic stress disorder (PTSD; Breslau et al., 1998). However, because the incidence of traumatic exposure is much higher than was once believed, a significant number of individuals are likely to be affected by PTSD. Specifically, estimates of exposure to at least one potentially traumatic event (PTE) across the lifespan have ranged from 50% to 90% in recent, large-scale epidemiologic studies (Breslau et al., 1998; Kessler et al., 1995). Clearly, the high prevalence of exposure dictates that a substantial number of individuals will develop PTSD at some point during the their lifespan, even though initial symptoms remit spontaneously among the majority of those exposed.

Lifetime prevalence rate estimates of PTSD vary considerably because of differences in assessment measures, sampling strategies, and evolving diagnostic criteria since its inception into the diagnostic nomenclature. The *Diagnostic and Statistical Manual of Mental Dis-*

orders (4th ed.; American Psychiatric Association, 1994), for instance, notes that lifetime prevalence rates have been estimated to be between 1% and 14%. Thus, even using the most conservative estimate of lifetime prevalence coupled with recent U.S. census data, at least 3 million U.S. citizens are likely to be afflicted with PTSD at some point during the lifespan. Most estimates of the lifetime prevalence of PTSD are approximately 8% (American Psychiatric Association, 2000), however, suggesting that this number is likely much higher. Moreover, although PTSD is the modal form of pathology that develops following trauma, depressive symptoms, substance abuse and dependence, and other forms of psychopathology are common as well. Accordingly, interventions designed to prevent chronic distress and promote positive posttraumatic adjustment are essential.

IDENTIFYING TRAUMA VICTIMS IN NEED OF EARLY INTERVENTION

Because the vast majority of trauma victims do not develop sustained emotional or psychological distress following traumatic exposure, it is impractical, inefficient, and arguably unethical to provide treatment to trauma victims irrespective of their needs or desire for services. Clearly, assessment and subsequent intervention should be made readily available for trauma victims who want help. As we have articulated elsewhere (Litz, Gray, Bryant, & Adler, 2002), however, formalized treatment in the very early posttrauma period (i.e., within a few days of the traumatic event) is ill advised as victims are typically too distraught to attend to and benefit from formal therapy. Instead, mental health professionals can be more helpful immediately after trauma by providing what has been termed *psychological first aide* to those that need and desire such help. Psychological first aide consists of supportive, empathic listening, and helping victims with practical assistance, such as ensuring safety and facilitating contact with organizations and resources that may help them to meet more basic needs.

Although formal treatment is not recommended in the first few days following traumatic exposure, it is counterintuitive to wait for severe, chronic pathology to develop prior to intervening. Identification of those who are least likely to resume normal functioning and

adjust positively following trauma is perhaps one of the most important services that mental health professionals can provide in the immediate weeks following trauma. In contrast to the blanket application of services to anyone exposed to a trauma (as typically occurs with traditional service delivery models such as CISD), identification of those most at risk for persistent distress is likely to allow for a more judicious and effective use of clinical resources.

Not surprisingly, one of the best predictors of PTSD is the presence of severe distress within the first few weeks following traumatic exposure. A diagnosis of acute stress disorder (ASD) is given when an individual experiences significantly distressing symptoms of reexperiencing, avoidance, dissociation, and increased arousal within 2 days to 4 weeks of the trauma. Several investigations have documented the predictive use of ASD in identifying those individuals who are likely to exhibit more enduring pathology among motor vehicle accident survivors (Harvey & Bryant, 1998, 1999, 2000) as well as among physical and sexual assault survivors (Brewin, Andrews, Rose, & Kirk, 1999).

In addition to pronounced distress soon after PTE exposure, chronic PTSD is more likely to ensue among trauma victims with a prior history of exposure to traumatic events. This is particularly true of individuals with histories of interpersonal violence and victimization in childhood or adulthood (Bremner, Southwick, Brett, & Fontana, 1992; Breslau et al., 1998; Green et al., 2000; Nishith, Mechanic, & Resick, 2000). Possible causal mechanisms, if any, remain to be specified empirically, but it has been hypothesized that traumatic exposure sensitizes victims to subsequent stressors, thereby potentiating the impact of exposure to traumatic events.

Clinicians should also attend to the quality of trauma victims' social support systems and the extent to which victims use those supports. Numerous studies have documented enhanced posttraumatic adjustment among victims who have positive social supports and who are motivated to use social support networks to discuss the traumatic experience (Forbes & Roger, 1999; Foy, Sipprelle, Rueger, & Carroll, 1984; Harvey, Orbuch, Chwalisz, & Garwood, 1991; Keane, Scott, Chavoya, Lamparski, & Fairbank, 1985; King, King, Fairbank, Keane, & Adams, 1998; Martin, Rosen, Durand, Knudson, & Stretch,

2000; Pennebaker & O'Heeron, 1984). Despite this rather voluminous body of literature, existing early interventions for trauma have failed to systematically integrate or emphasize the use of trauma victims' naturally occurring support systems. It should not simply be assumed that those with extensive networks of friends and family will necessarily use those supports after a trauma. As a point of fact, the acute distress that typically occurs in the wake of trauma may impair the victim's capacity to use others in an effort to cope with posttraumatic symptoms (Riggs, Byrne, Weathers, & Litz, 1998; Solomon, Mikulincer, & Avitzur, 1988).

In sum, more pronounced distress in the immediate weeks following traumatic exposure, prior PTE exposure, and diminished social support are all associated with greater posttraumatic emotional and psychological difficulties. As such, these factors should be evaluated when trying to identify victims who are most likely to benefit from more formalized interventions following trauma. Future empirical work is needed to establish the level of each of these variables (alone or in combination) that affords optimal prediction of subsequent PTSD and need for intervention. Despite the absence of hard-and-fast screening criteria, however, attention to these factors is likely to result in more efficient and ethical applications of clinical resources.

IMMEDIATE NEEDS OF TRAUMA VICTIMS

Historically, interventions for trauma victims have attended almost exclusively to the amelioration of psychological and emotional distress. Although such a focus is certainly not surprising and is generally quite reasonable given the focus, training background, and expertise of mental health professionals, it is worth questioning whether such a goal is even possible in the very early stages (i.e., the first few days) following traumatic exposure. Trauma survivors may not be in a position to benefit from traditional psychological interventions that target anxiety and affective symptoms when they have legitimate concerns about safety, shelter, or significant financial problems resulting from the traumatic event. Accordingly, resolution of these issues may be a necessary precondition to an individual's capacity to benefit from early interventions addressing psychological variables. Resnick,

Acierno, Holmes, Dammeyer, and Kilpatrick (2000) recommend that safety planning and emergency stabilization should precede any efforts to address psychological or emotional sequelae. In particular, victims may need contact information for shelters and emergency housing, as well as services to address pressing medical issues. Quite obviously, the presence of suicidal and homicidal ideation and significant substance abuse should be routinely assessed following traumatic exposure, as the risk for each of these increases significantly after a trauma, complicating the course of ASD-PTSD treatment (Resnick et al., 2000).

Prior to discussing promising behavioral interventions for recent trauma victims, it is necessary to describe the modal early intervention for those exposed to traumatic events—CISD. Although other forms of psychological debriefing (PD) have been developed, these tend to be variants on the same theme and are generally less comprehensive in scope than CISD. Because more thorough reviews of the history and efficacy of debriefing are available (Litz et al., 2002) and because CISD is the most widely used form of debriefing, we will briefly describe this specific approach prior to reviewing the literature bearing on debriefing generally.

CRITICAL INCIDENT STRESS DEBRIEFING

To date, CISD has been the most routinely administered early intervention following traumatic events. Critical incident stress debriefing (Mitchell & Everly, 1995) is typically applied to emergency services personnel and other professionals whose work entails regular exposure to traumatic events (e.g., law enforcement personnel, fire fighters, military personnel, and disaster workers such as The American Red Cross). Critical incident stress debriefing is not presented as a clinical intervention, but rather as an opportunity for individuals to share their common normal responses to extreme circumstances with CISD team members, at least one of whom is highly familiar with the culture of the work system. These factors have lead to the pervasive and routine application of CISD in risky occupations such as the military, even in the face of insufficient evidence for its efficacy (see Deahl et al., 2000; Litz et al., 2002).

The overarching goals of CISD are (a) to educate individuals about stress reactions and ways of coping adaptively with them, (b) to instill messages about the normality of reactions to PTE, (c) to promote emotional processing and sharing of the event, and (d) to provide information about, and opportunity for, further trauma-related intervention if it is requested by the participant. All individuals exposed to a PTE are invited, within days, to participate in a 3 to 4 hour session in which the incident is reviewed. During this time, participants are asked to describe the stressor and provide a factual account of the event. Next, participants describe their thoughts during the incident. Ultimately, emotional reactions to the event are shared and these reactions are normalized by the facilitator.

Personnel are invited to attend a CISD regardless of the degree of their acute symptoms or functional impairment (Hokanson & Wirth, 2000). Thus, participants in a CISD could be free from acute symptoms and have very little risk for chronic PTSD, or individuals could be experiencing severe ASD. The extent to which those who are extremely distressed may truly perceive their reactions to be normalized in such a context is unclear. A related criticism of CISD is that an individual who is reluctant to disclose personal information may feel stigmatized and pressured by the group's expectations. In this context, sharing of personal experiences may have harmful, rather than helpful, consequences (Young & Gerrity, 1994).

Other concerns about CISD center on the possibility that individuals may be mandated or subtly coerced by their employers to attend a debriefing session. If so, it raises the possibility that choice and control are diminished among traumatized people, which is likely to create frustration, anger, and resentment and, in turn, intensify the experience of victimization. Although the formal CISD literature emphasizes that debriefing attendance is voluntary, volunteer status may be affected by work cultures unbeknownst to CISD personnel (Gist & Woodall, 2000).

Critical incident stress debriefing is purportedly not intended for direct victims of trauma but, instead, is designed as an intervention for individuals such as police, fire, and other emergency service personnel who are indirectly exposed to a critical incident by virtue of their responsibilities as professional responders and who are, therefore,

secondary victims (Jacobs, Horne-Moyer, Jones, 2004). The formal distinction between primary or secondary exposure appears to be rather arbitrary, however. Moreover, the distinction is inconsistent with contentions that CISD is capable of reducing the risk for PTSD and longer term distress (Everly, Flannery, & Mitchell, 2000; Mitchell & Everly, 1995). If indirectly exposed persons are not traumatized, PTSD would not be expected to ensue. If, on the other hand, CISD does prevent PTSD in individuals who would otherwise develop the disorder, the tacit acknowledgement is that indirectly exposed individuals can, in fact, be trauma victims.

Partly in response to the concerns mentioned above, as well as concerns about its efficacy, the CISD framework has been revised recently so that it is now considered part of a more comprehensive, Critical Incident Stress Management (CISM) program (Everly & Mitchell, 2000). The CISM interventions are designed to psychologically prepare individuals, prior to dangerous work, to meet the support needs of individuals during critical incidents, provide CISD as well as delayed interventions, consult with organizations and leaders, work with the families of those directly affected by trauma, and facilitate referrals and follow-up interventions to address lingering stress disorders. However, there have been no controlled independent empirical studies of the various components of CISM to date.

RESEARCH ON DEBRIEFING EFFECTIVENESS

A number of published, peer-reviewed studies of PD suggest that it is an effective intervention (see Everly et al., 2000 for a review). However, until recently, there was a dearth of randomized controlled trials (Rose, Bisson, & Wessely, 2001). Accordingly, the studies reviewed by Everly et al. (2000) all suffer from the fundamental problem of a lack of random assignment, limiting any causal conclusions that might be made. In addition, when self-selection determines participation, there is a possibility that individual differences (e.g., greater distress, higher motivation) may explain inclusion in PD. This limitation is compounded by the fact that the majority of studies reviewed by Everly et al. (2000) failed to assess individuals prior to the intervention, so post-PD symptom ratings could reflect enduring predebrief-

ing levels of distress. Finally, no study reviewed by Everly et al. employed independent assessment of outcome. In sum, the majority of studies bearing on the efficacy of PD are fraught with substantive methodological limitations that greatly hamper interpretability (Litz et al., 2002; Rose et al., 2001).

Fortunately, a few randomized controlled trials (RCT) of PD have been conducted, providing better tests of the therapeutic impact of these interventions. In contrast to earlier studies, all of the RCT randomly allocated participants to treatment conditions, used psychometrically sound outcome measures and structured clinical interviews, and reported longer term follow-up data (Bisson, Jenkins, Alexander, & Bannister, 1997; Conlon, Fahy, & Conroy, 1999; Deahl et al., 2000; Hobbs, Mayou, Harrison, & Warlock, 1996; Mayou, Ehlers, & Hobbs, 2000; Rose, Brewin, Andrews, & Kirk, 1999). More detailed descriptions of the methodological strengths and limitations of the individual studies are available (Rose et al., 2001) and, thus, will not be presented here. Psychological debriefing did not evidence superior outcomes relative to no intervention conditions in any of the RCT. As we have reported elsewhere (Litz et al., 2002), the mean symptom improvements across studies for PD and control conditions were nearly identical. Two methodologically rigorous studies of PD found significantly poorer outcomes in the PD conditions. It should be noted, however, that in one of these studies (Bisson et al., 1997) the PD condition had significantly higher symptom levels prior to intervention despite randomization. Furthermore, this study was conducted with inpatient burn victims and it is not clear that this is an appropriate test of the efficacy of debriefing given that proponents of debriefing have not advocated its usage in this type of setting or with this type of population. The other study documenting poorer outcomes among debriefed participants (Mayou et al., 2000) suffered from marked attrition, so great caution should be exercised when forming conclusions on the basis of that investigation.

Taken together, there appears to be little empirical support for the contention that CISD or more general debriefing interventions promote significantly better posttraumatic adjustment. At the same time, assertions that PD results in symptom exacerbation or is generally harmful appear to be equally unwarranted at this point in time. It may

be that CISD is helpful for some subset of traumatized individuals, but that such benefits have been difficult to detect because of its blanket application to any or all exposed individuals.

EARLY BEHAVIORAL INTERVENTIONS FOR TRAUMA VICTIMS

Despite the rather substantial contributions of learning theory to the development of etiological models of PTSD (Naugle & Follette, 1998), few systematic, behavioral interventions for recent trauma victims have been developed and empirically evaluated. Although exposure-based treatments are widely regarded as the standard of care for PTSD (Rothbaum, Meadows, Resick, & Foy, 2000), these and other behaviorally informed interventions are rarely provided in weeks immediately following a traumatic event, even among significantly distressed individuals. Fortunately, the last few years have witnessed increased efforts to address this void, and we will now briefly review two promising, innovative behavioral interventions for recent victims.

Foa, Hearst-Ikeda, and Perry (1995) developed a cognitive-behavioral intervention for rape and aggravated assault victims to be delivered relatively soon after the assault. In this manner, maladaptive responses that may worsen victims' symptom course (e.g., extreme avoidance or social withdrawal) may be replaced by strategies that are associated with better outcomes and positive posttraumatic adjustment. Specifically, the intervention included psychoeducation, relaxation training, imaginal and in vivo exposure, and cognitive restructuring, as these are common elements of effective treatments for chronic sequelae of traumatic experiences (Resick & Schnicke, 1993; Rothbaum et al., 2000).

In contrast to traditional debriefing-oriented approaches, Foa et al. (1995) designed a four-session intervention that also included therapeutic exercises that victims were instructed to complete between sessions. Unlike PD, the intervention is delivered in an individual therapy format as opposed to a group setting. The first session is primarily psychoeducational in nature, as victims are given information about common posttraumatic reactions and symptoms. This session is also

used to elicit trauma-reminiscent cues and activities that the individual may be avoiding, and this information is used in subsequent sessions to develop hierarchies of avoided activities that will ultimately be targeted using imaginal and in vivo exposure techniques. During the second session, a rational for exposure therapy is given, and relaxation training is provided. The relaxation training is audiotaped so that victims can practice relaxation techniques at home. The second session also includes imaginal-exposure therapy as victims are asked to close their eyes and to vividly imagine their assaults. They are instructed to describe the assault aloud and in present tense, and these accounts are also audiotaped so that the victim can use the tape for daily imaginal-exposure exercises between sessions. If, during the course of the narrative, maladaptive interpretations or beliefs about the assault (e.g., self-blame) emerge, attention is devoted to the identification and modification of these beliefs (i.e., cognitive restructuring). During the third session, in addition to imaginal-exposure and cognitive-restructuring exercises, in vivo exposure exercises are developed using the hierarchy of avoided trauma-related cues and activities, and victims are encouraged to engage in these exercises between sessions. They are also instructed to monitor and record negative thoughts, feelings, and cognitive distortions using a daily diary. The final session is primarily devoted to imaginal exposure and cognitive restructuring.

In an empirical evaluation of this intervention, Foa et al. (1995) compared the symptom course of recent assault victims receiving this treatment package with assessment-only control participants who were matched on initial symptom severity, type and severity of assault, demographic characteristics, and time since the assault. At 2-months postassault, those receiving the CBT treatment reported significantly fewer PTSD symptoms relative to the assessment-only control condition. At the 5.5-month follow-up period, the active treatment condition reported significantly fewer depressive symptoms, but the difference between conditions on PTSD symptoms did not remain statistically significant. Although the magnitude of this difference was still fairly large, low statistical power likely accounts for the lack of a statistically significant finding. Moreover, because participants were not selected for treatment on the basis of initial symptom severity or

other risk factors, both groups exhibited significant symptom remission. It is possible that a more selective application of this intervention (i.e., providing the intervention to those who are acutely distressed or otherwise more likely to experience chronic, unremitting distress) would provide a better test of the intervention and may, in fact, result in more compelling outcomes. That is, the significant symptom remission exhibited by the comparison group would be less likely to occur if groups were comprised only of individuals who are at risk for sustained posttraumatic difficulties. Because most individuals who encounter traumatic events do not experience chronic distress, the composition of the groups in this study may have made it particularly difficult to demonstrate treatment efficacy because most individuals will not exhibit enduring difficulties even in the absence of treatment.

Although the results of this investigation are encouraging, it is important to acknowledge that participants were not randomly assigned to conditions and that the frequency and duration of contact for treatment and assessment conditions were not matched. Accordingly, definitive statements about the efficacy of this intervention cannot be made until these results are replicated in the context of a randomized clinical trial.

Bryant, Harvey, Dang, Sackville, and Basten (1998) also report a successful behavioral-treatment program for recently traumatized individuals. The intervention is similar to that of Foa et al. (1995) in terms of treatment components. Specifically, the intervention includes psychoeducation about common posttraumatic reactions, relaxation training, imaginal and in vivo exposure, and cognitive restructuring exercises. The intervention consists of five weekly sessions that are each 1.5 hours in duration.

Bryant et al. (1998) specifically targeted those individuals experiencing significantly elevated levels of distress (i.e., they met diagnostic criteria for ASD) following life threatening motor vehicle accidents. Accordingly, it was possible to determine the efficacy of the intervention among individuals who are especially likely to develop chronic PTSD. Interpretability of their results was also facilitated by the inclusion of a supportive counseling control condition. Thus, it is possible to evaluate the impact of the intervention above and beyond that of nonspecific therapeutic factors. At posttreatment and at the 6-

month follow-up assessment, significantly fewer participants in the behavioral-treatment condition met diagnostic criteria for PTSD. The behavioral treatment was also associated with significantly reduced depressive symptoms at both time points.

IMPLICATIONS FOR EARLY INTERVENTIONS FOR TRAUMA VICTIMS

Despite the encouraging results of these early behavioral interventions for trauma victims, it is not altogether clear which components—alone or in combination—are responsible for promoting positive posttraumatic adjustment. On the surface, these treatments appear to have a great deal in common with traditional debriefing interventions that lack compelling empirical support for their efficacy. Like debriefing, these interventions are provided shortly after trauma, include psychoeducation components designed to inform victims about common posttraumatic reactions and symptoms, encourage active processing of the traumatic event and discourage attempts to avoid thinking about the trauma, and teach anxiety-management skills and techniques.

To be fair, the behavioral interventions described above have not been rigorously tested in randomized clinical trials in varied trauma contexts, and their superiority to debriefing-based interventions is hardly a foregone conclusion. Nevertheless, the very positive outcomes in an area that is generally characterized by null findings are heartening and certainly warrant attempts to identify factors that may account for these outcomes. Despite many surface similarities between debriefing-based interventions and the behavioral interventions described above, there are quite obviously numerous differences which likely account for the apparent efficacy of the behavioral interventions.

Although trauma victims are actively encouraged to recall and describe the trauma in CISD and other debriefing interventions, this process is markedly different from the treatments of Foa et al. (1995) and Bryant et al. (1998) in form and purpose. Debriefing-based interventions are designed to promote disclosure, normalize emotional reactions to the traumatic event, and, when provided to an organization or work group such as a fire department, enhance group cohesion

and morale (Ruzek & Watson, 2001). The type of disclosure and processing that characterizes behavioral interventions for trauma victims is more structured, prolonged, and systematic. The imaginal and in vivo exposure exercises are designed to promote a decrease in anxiety by having the trauma survivor repeatedly confront unpleasant, but objectively safe trauma memories (imaginal exposure) and trauma-reminiscent cues, settings, and activities (in vivo exposure). Thus, the goal of exposure is not mere disclosure of the event (although this may certainly be beneficial) but to directly confront and decrease anxiety secondary to trauma and to prevent efforts to avoid trauma-related memories and emotions, as such efforts can maintain or exacerbate distress (Rothbaum et al., 2000). Most exposure-based treatments for trauma involve several sessions of exposure therapy. It may be that the one-time disclosure of the event and attendant emotional reactions that characterizes debriefing-based interventions is simply insufficient to decrease the significant anxiety of markedly distressed survivors and does little to prevent drastic efforts to avoid trauma memories and cues among such individuals. Sustained and repeated contact with trauma cues and memories may be required to prevent chronic distress among those individuals who are most distressed in the wake of trauma.

Both the interventions of Foa et al. (1995) and Bryant et al. (1998) attend to trauma-relevant cognitions that may exacerbate distress or further impede recovery, as both interventions include a cognitive-restructuring component. These treatments seek to identify, challenge, and modify maladaptive thoughts and beliefs related to the trauma, which may account for their encouraging outcomes. Critical incident stress debriefing and other debriefing-oriented approaches are also designed to elicit thoughts pertaining to the trauma, but for a different purpose. Specifically, the thought phase of debriefings is designed to facilitate the subsequent sharing of emotional reactions (Mitchell & Everly, 1996) because immediate emotional processing may be too difficult or threatening. Thus, psychological debriefings place less emphasis on modifying maladaptive beliefs that stem from trauma. Although cognitive restructuring may account for the apparent efficacy of the interventions developed by Foa et al. (1995) and Bryant et al. (1998), dismantling research is required to evaluate this

possibility. Such studies are especially important in light of recent research failing to demonstrate enhanced outcomes for individuals with chronic PTSD receiving cognitive therapy and exposure therapy relative to those receiving either component alone (Marks, Lovell, Noshirvani, Livanou, & Thrasher, 1998). Whether this is equally true of early interventions for trauma remains to be determined.

The timing and duration of early interventions for trauma might also impact clinical outcomes. As mentioned previously, psychological-debriefing proponents generally advocate that debriefings occur as soon as possible after the traumatic event, and this almost invariably results in such interventions being provided within a few days of the event. If (as articulated earlier) extremely distressed individuals are preoccupied with concerns about more basic needs (e.g., safety, shelter, etc.) or are so incapacitated immediately after the event, they may not be in a position to attend to, process, or otherwise benefit from well meaning but ill-timed interventions. Empirical inquiry is required to determine if there is, in fact, an optimal time to intervene following a traumatic event. It is worth noting, however, that in contrast to CISD and other debriefing-based interventions, both Foa et al. (1995) and Bryant et al. (1998) intervened an average of 10 or more days posttrauma. Although speculative, it may be that that participants in these investigations were able to recover from the initial incapacitating distress of their traumas and were in a better position to benefit from the intervention provided.

Similarly, the extent and duration of the intervention may account for the differential outcomes. The single-session approach to debriefing may simply be too brief to be helpful. It should be noted that the developers of CISD have long acknowledged that more distressed individuals would likely need more than a single debriefing session and that, in these cases, greater follow-up care is warranted (Everly et al., 2000). Unfortunately, others in the debriefing camp have not adhered to these suggestions and have been less attentive to the need for assessment and follow-up care.

A related, but perhaps more important factor that may account for the encouraging findings of Foa et al. (1995) and Bryant et al. (1998) is the uniquely behavioral emphasis on homework and structured therapeutic exercise that is prescribed between sessions. Although

exposure-based therapies have other benefits as well, they were originally designed to promote extinction of conditioned anxiety. Homework assignments involving imaginal and in vivo exposure exercises between sessions allow for a more complete and expedient reduction in anxiety to occur. Homework exercises in behavioral therapies are also designed to promote generalization of treatment gains. Decreased anxiety while discussing traumatic events in the context of the therapist's office is certainly advantageous, but, ultimately, a reduction in fear and distress to trauma-reminiscent cues and activities in the victim's natural environment is the sine qua non of successful trauma-focused therapy. Studies that have examined the impact of exposure-based homework assignments in treating anxiety disorders have consistently and compellingly demonstrated enhanced therapeutic outcomes attributable to this component of treatment (Edelman & Chambless, 1995). Furthermore, there is some evidence to suggest that exposure-based homework may be as or more effective than in-session therapist-aided exposure (Al-Kubaisy, Marks, Logsdail, & Marks, 1992; Fava, Grandi, & Canestrari, 1989; Marks, 1983;), which certainly makes sense from a treatment generalization perspective.

A NEGLECTED CORRELATE OF TRAUMATIC EXPOSURE: TRAUMATIC BEREAVEMENT

Treatments for traumatized individuals have focused almost exclusively on the amelioration of symptoms of PTSD, fear, anxiety, and other sequelae of personal life threat and endangerment. Such an approach is certainly reasonable and relevant for a large majority of victims suffering from chronic emotional and behavioral difficulties secondary to trauma. It is questionable whether such an approach can, by itself, address the needs of those who have lost a very close friend or family member during a traumatic event. The importance of responding to such needs can not be overstated, especially in light of a recent finding that the PTSD-eliciting traumatic event in nearly one third of PTSD cases is the sudden, unexpected death of a close friend or relative (Breslau et al., 1998). Moreover, incidents such as the terrorist attacks, natural disasters, and motor vehicle accidents are not only distressing because of an individual's experience of personal life

threat or injury, but they may also involve equal or greater distress related to the sudden unexpected death of a loved one. Exposure-based techniques may address symptoms related to the former source of distress, but it is questionable whether they can adequately address the latter. That is, individuals experiencing heightened and sustained levels of anxiety and distress secondary to a life-threat or significant personal injury may benefit greatly from exposure-based interventions. The value of such an intervention in significantly reducing chronic and severe grief reactions of those who are primarily traumatized by the unexpected death of a loved one is unclear.

Attempts to incorporate exposure into treatments for traumatic or complicated grief have produced encouraging results (Mawson, Marks, Ramm, & Stern, 1981; Shear et al., 2001; Sireling, Cohen, & Marks, 1988). It is difficult to draw any definitive conclusions from these investigations, however, as all are characterized by very small sample sizes and significant attrition. Moreover, in these studies, exposure was combined with other treatment components such as behavioral activation and interpersonal therapy, so it is difficult to attribute treatment effects to exposure specifically. All studies encouraged exposure to avoided bereavement cues, and two of the studies (Mawson et al., 1981; Sireling et al., 1988) instructed control participants to actively avoid bereavement cues. It may be, then, that an exposure component to grief treatment is particularly helpful for traumatically bereaved individuals who go to great lengths to avoid thinking about the deceased or encountering reminders of the death. In such instances, exposure might promote some acceptance of the loss thereby allowing the bereaved individual to cope with the death in a more adaptive fashion and slowly recover from the intense loneliness and despair that characterizes complicated bereavement. The proportion of traumatically bereaved individuals that adopt extreme avoidance behaviors remains to be empirically determined. It seems clear that an equally (or perhaps more) common response is to pay tribute to or memorialize those that have been killed, as evidenced by the response of surviving New York City firefighters following the attacks on the World Trade Center, to cite one of many examples. Although exposure might be very useful for those having difficulty acknowledging the death or who have adopted extremely avoidant strategies to

cope with the loss, its utility in treating those who acknowledge the loss and are not avoidant is less clear.

Individuals who have recently experienced the sudden, unexpected death of a close friend or relative may have other significant emotional difficulties in addition to or instead of PTSD. Traumatic grief is characterized by intrusive thoughts about the deceased, yearning or searching for the deceased, inordinate loneliness, feelings of futility about the future, difficulty acknowledging the death, and feelings that life is meaningless following the person's death among other features (Prigerson et al., 1999). Traumatic grief is most notably distinct from PTSD in that the primary source of distress is separation and loss rather than intrusive reexperiencing symptoms and attendant anxiety (Prigerson & Jacobs, 2001). Sometimes, the loneliness and isolation resulting from the loss of a loved one can lead to greater efforts to remember the deceased and to seek out reminders of the individual. In this context, reexperiencing may be a source of comfort (Prigerson et al., 1999). Given the absence of avoidance symptoms and the fact that the traumatically bereaved may actually seek out reminders of the recently deceased, the theoretical underpinnings of exposure-based techniques do not support the use of such techniques in alleviating this form of distress. Unfortunately, knowledge of interventions that are not likely to be particularly effective does not provide much direction in deciding how best to intervene. If research-based knowledge about early interventions for trauma (generally) is limited, knowledge about how to treat that subset of recently traumatized victims who are traumatically bereaved represents a veritable vacuum.

There is certainly reason to believe that cognitive-behavioral approaches can be effective in meeting the needs of the recently traumatically bereaved, however. As mentioned previously, exposure-based techniques may be effective if the individuals are actively avoiding reminders of the trauma in an attempt to stave off thoughts about the deceased's last moments. In such instances, however, exposure would be a preliminary component of therapy that would facilitate subsequent efforts to target grief reactions specifically (Fleming & Robinson, 2001). More cognitively oriented efforts designed to target chronic grief have been found to be successful and have been described elsewhere (Fleming & Robinson, 2001), but their applicabil-

ity to an early intervention context remains untested. Whether brief interventions delivered within a few weeks of a traumatic loss can be developed, which can reduce the likelihood of traumatic or complicated grief, remains to be seen.

It may be that the magnitude and extent of the loss is so great that it cannot be effectively treated in a brief, early intervention format. A longer course of therapy may be required to adequately address such issues. It seems reasonable to suppose, however, that behavioral interventions designed to encourage victims to use natural social supports and to educate victims about behaviors that can exacerbate symptoms of grief and loss (e.g., social withdrawal and isolation) may be able to reduce the likelihood of severe, complicated grief reactions.

BEHAVIORAL PRACTICE GUIDELINES

Perhaps the most defensible conclusion that can be reached from a review of the early intervention literature is that greater attention to the development and empirical validation of treatment models for recently traumatized individuals is desperately needed. Practice recommendations that can be made at this juncture are necessarily preliminary, as the early intervention field is very much in its infancy. Nevertheless, the ubiquity of exposure to potentially traumatic events coupled with the encouraging outcomes of newly developed behavioral interventions for recent trauma victims warrant the following treatment guidelines. Although much empirical work (dismantling studies in particular) remains to be done, several guiding principles have emerged.

REFRAIN FROM PROVIDING FORMAL INTERVENTION IMMEDIATELY AFTER TRAUMA

There is no compelling evidence at present to support the contention that any sort of intervention delivered within the first few days of a traumatic event is effective in preventing significant emotional and psychological distress. Nearly everyone exposed to a traumatic event will experience emotional distress immediately afterwards, but this is a normal (if unpleasant) emotional response to a horrific occurrence.

Given that the great majority of those exposed to trauma are anxious, sad, grief stricken, or otherwise notably upset immediately afterwards, attempts to identify those who are likely to experience protracted difficulties are not likely to be very successful. Moreover, because most people exposed to traumatic stressors do not develop chronic psychopathology, intervention efforts that target all survivors represent a remarkably inefficient use of clinical resources, and, in instances of mass violence (e.g., the terrorist attacks on the World Trade Center), such efforts are simply not feasible.

Although formal treatment is not recommended in the hours or days immediately following a traumatic event, psychological first aid is certainly reasonable. As mentioned previously, psychological first aid involves the provision of emotional support, information, and attempts to meet pressing practical needs—such as providing contact information for emergency services that may meet the individual's pressing medical, financial, or shelter needs. Contrary to the dictates of many formal debriefing-based interventions, receipt of such aid should be entirely voluntary and be provided only to those who desire such services. Information about the availability of supportive services should be readily available, but vigorous efforts to encourage victims immediately following traumatic exposure to disclose details of the event or their emotional responses to the event are ill-advised and arguably unethical. Psychoeducational materials that describe common sequelae of trauma and how and where to get help if desired should be widely distributed. These materials may also include information about the potential benefits of (at a time and level of detail with which they are comfortable) discussing their reactions to the event with trusted friends, family members, or significant others. Materials might also include information about the possible complications that can ensue if victims go to great lengths to avoid trauma-related cues and activities. In short, victims should be given information, and support should be available, but professionals must trust victims to make informed decisions about how best to cope with the effects of trauma and must respect victims' decisions not to use therapeutic support that may be available.

SCREEN FOR RISK FACTORS AMONG INDIVIDUALS WHO SEEK PROFESSIONAL SUPPORT

For those victims who do seek out professional support or services immediately after a traumatic event, it is advisable to conduct screenings to identify those who may be likely to develop PTSD or other chronic difficulties secondary to trauma. The purpose of such screenings is not to evaluate PTSD-symptom status, as most individuals who will not develop the disorder will report significant distress immediately after traumatic exposure. Rather, screenings should focus on obtaining information about the presence of individual and historical factors that are known to predict chronic psychopathology following trauma. Specifically, clinicians should inquire about history of exposure to other traumatic events, pretraumatic psychological difficulties, inadequate social supports, and exposure to grotesque aspects of the current trauma (e.g., seeing mutilated or dismembered corpses), because these factors are associated with poorer posttraumatic adjustment (Bramsen, Dirkzwager, & van der Ploeg, 2000; Buckley, Blanchard, & Hickling, 1996; Ehlers, Mayou, & Bryant, 1998). Victims should be informed about the nature of and reasoning behind such questioning prior to screening, and their right to refrain from answering such questions should be respected absolutely. Professionals, no matter how well intentioned or supportive, should not encourage responding from individuals who are reluctant to provide such information.

TIMELY SYMPTOM-BASED ASSESSMENT

Symptom-based evaluation is warranted after the initial, severe distress of the traumatic event has worn off. Our previous assertion that assessment of trauma-related distress immediately after the event is futile should not be misconstrued as a call for a moratorium on all attempts to identify those likely to develop chronic distress on the basis of acute symptomatology. On the contrary, numerous investigations have documented that significant distress in the weeks following trauma is a significant predictor of more sustained or enduring distress (Brewin et al., 1999; Harvey & Bryant, 1998, 2000). The resolution of this apparent paradox pertains to timing. Significant levels of distress

within hours or days of the event is commonplace (Solomon, Laor, Weiler, & Muller, 1993), limiting the accuracy of symptom-based prediction of chronic distress. Those who continue to endorse profound distress weeks after the event, however, are especially likely to develop more chronic forms of psychopathology, so symptoms reported during this period afford more accurate prediction of maladaptive outcomes. In support of this proposition, a recent randomized clinical trial found that motor vehicle accident victims whose symptoms did not remit during the 3 weeks following their accidents and who were subsequently assigned to a cognitive therapy condition improved significantly relative to control participants (Ehlers et al., 2003). Although more research is needed to identify the optimal time frame for symptom-based evaluations following trauma, we recommend that such assessments should occur no sooner than one week after the traumatic event. Earlier assessments may be perceived as intrusive and are likely to produce an excessive number of false positives.

EMPIRICALLY INFORMED BEHAVIORAL INTERVENTION

When individuals who are at risk for chronic difficulties and who have expressed an interest in receiving professional care and support have been identified, we recommend more formalized behavioral interventions that are informed by the recently developed, empirically supported treatments described earlier. Although one-session debriefings immediately after the traumatic event have not been shown to promote positive posttraumatic adjustment, brief multisession behavioral interventions delivered between several days and a few weeks after the trauma have been associated with improved outcomes. Interventions that combine psychoeducation, in vivo and imaginal exposure, and anxiety-management techniques are most promising, as these are the common elements of the interventions developed by Foa et al. (1995) and Bryant et al. (1998). Cognitive restructuring may be helpful as well, although previous research has not consistently revealed a synergistic effect of combining exposure and cognitive therapy (Marks et al., 1998). Psychoeducation should focus on maladaptive strategies, which trauma victims often call on in an effort to manage their distress (e.g., avoidance of trauma cues), and on the

manner by which such strategies can ultimately prolong trauma-related distress. Early intervention efforts should also be structured to encourage home-based therapeutic exercises (e.g., in vivo and imaginal exposure) between sessions to reduce reliance on maladaptive distress-management strategies, to accelerate therapeutic effects, and to promote the generalization of treatment gains.

It should go without saying that certain individuals may not be appropriate candidates for exposure-based interventions. Most notably, those experiencing psychotic features or strong suicidal ideation may benefit from an intervention that lacks an exposure component but includes the other treatment components. Quite obviously, such individuals will require more than a four or five session trauma-focused intervention. It bears mentioning, however, that other commonly cited prohibitive factors and concerns about exposure are not supported by research and are based more on myth than empirical evidence (Foy et al., 1996; van Minnen, Arntz, & Keijsers, 2002). Moreover, the underuse of exposure-based techniques may be more related to therapists' fears about their own or their patients' temporary distress during exposure therapy than to the actual side effects or complications of the techniques themselves (Foy et al., 1996).

ATTENTION TO TRAUMATIC GRIEF

Finally, clinicians should attend to the unique needs of those who have lost a close friend or relative as a result of the traumatic event. Such attention may include exposure-based interventions for those who are having difficulty acknowledging the loss or who are otherwise extremely avoidant of reminders of the deceased. Although a great deal more research is needed to inform the early treatment of traumatic grief, behavioral interventions designed to encourage the use of existing social supports and discourage social withdrawal and isolation may help to reduce protracted and severe grief reactions.

In sum, future treatment development efforts need to go beyond traditional interventions that primarily or exclusively target symptoms of anxiety resulting from personal injury or life threat. Although such symptoms are quite common, the impact of trauma is far reaching, and sequelae are diverse. Future interventions should mirror this diversity

and be flexible enough to target the needs of victims presenting with widely varying symptom profiles.

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